

**Amendments to the Specification:**

Please amend the specification as follows:

Please replace paragraph starting at page 1, line 26, continuing onto page 2, with the following rewritten paragraph:

B1  
Data or a control signal is communicated in the forward or reverse direction. Base station 10 centrally controls timing for the communication. Namely, base station 10 provides ~~notifies~~ the timing to each terminal station (11<sub>1</sub> – 11<sub>4</sub>). The communication timing is scheduled by base station 10 according to a transmission request issued from each terminal station (11<sub>1</sub> – 11<sub>4</sub>) to base station 10 or a transmission request to terminal station (11<sub>1</sub> – 11<sub>4</sub>) taking place in base station 10. In the scheduling, base station 10 allocates, by referring in an order of requests to information necessary for the scheduling such as a transmission band pass requested for each transmission, a transmission band pass associated with a necessary data length or the like in fixed-length frame using a time slot as an allocating unit.

Please replace paragraph starting at page 8, line 20, with the following rewritten paragraph:

B2  
An object of the present invention is to provide a technique by which a ~~provides to~~ scheduling controller ~~to process the scheduling which~~ efficiently reflects a latest condition, ~~and scheduling control method thereto.~~

Please replace paragraph starting at page 8, line 29, continuing onto page 9, with the following rewritten paragraph:

B3  
In accordance with one aspect of the present invention ~~described in claim 1,~~ there is provided a scheduling controller comprising (1) request receiving means for receiving means for receiving a plurality of processing requests, (2) start time calculating means for calculating, according to a number of processing requests received by the request receiving means and types thereof, a scheduling start time relative to scheduling end time predetermined, and (3) scheduling means for scheduling processing requests received by the request receiving means from the scheduling start time calculated by the start time calculating means to the scheduling end time.

Please replace paragraph starting at page 9, line 9, with the following rewritten paragraph:

B4  
In accordance with a feature of the invention ~~described in claim 1~~, the start time calculating means calculates total time necessary for the scheduling according the number of and types of processing requests received by the request receiving means and then calculates the scheduling start time relative to the predetermined scheduling end time. The scheduling means schedules the processing requests received by the request receiving means from the scheduling start time calculated to the scheduling end time.

Please replace paragraph starting at page 9, line 17, with the following rewritten paragraph:

B5  
In accordance with another aspect of the invention ~~described in claim 2~~, a scheduling controller includes (1) request receiving means for receiving processing requests from a plurality of terminal stations, each of the processing request being a transmission band pass request and including a transmission request and a data length thereof, (2) start time calculating means for calculating, according to the processing requests received by the request receiving means, a scheduling start time relative to a scheduling end time predetermined, (3) scheduling means for allocating processing requests, received by the request receiving means from the scheduling start time calculated by the start time calculating means t the scheduling end time, to time slots in a frame, and (4) reporting means for reporting information of time slot allocation by the scheduling means to the terminal stations.

Please replace paragraph starting at page 10, line 1, with the following rewritten paragraph:

B6  
In accordance with a feature of the invention ~~described in claim 2~~, the start time calculating means calculates total time necessary for the scheduling according the number of and types of band pass requests from a plurality of terminal stations received by the request receiving means. Each of the transmission band pass requests includes a transmission request and a data length thereof. The start time calculating ~~mean~~ means accordingly calculates the scheduling start time relative to the predetermined scheduling end time. In the scheduling, the scheduling means allocates the transmission and pass requests, received by the request

B6  
receiving means form the scheduling start time calculated to the scheduling end time, to time slots in a frame. The reporting means sends a result of allocation to the terminal stations. The dynamic slot assignment is thereby achieved.

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Please replace paragraph starting at page 10, line 15, with the following rewritten paragraph:

B7  
In accordance with yet another feature of the invention ~~described in claim 3~~, there is provided a scheduling controller that in accordance with claim 1 or 2. ~~The scheduling controller~~ further includes storage means for storing the scheduling end time predetermined. The start time calculating means calculates, according to the processing requests received by the request receiving means, a scheduling start time relative to the scheduling end time stored in the storage means.

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Please replace paragraph starting at page 10, line 22, continuing onto page 11, with the following rewritten paragraph:

B8  
In accordance with a feature of the invention ~~described in claim 3~~, the scheduling controller includes the storage means for storing a scheduling end time predetermined. The start time calculating means reads the scheduling end time as a reference, total time necessary for the scheduling according to the processing requests received by the request receiving means. The start time calculating means accordingly determines the scheduling start time. Therefore, since the scheduling end time can be set as a parameter to be varied if necessary, the scheduling can be more flexibly carried out.

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Please replace paragraph starting at page 11, line 2, with the following rewritten paragraph:

B9  
In accordance with another feature of the invention ~~described in claim 4~~, there is ~~provided~~ a scheduling controller ~~in accordance with claim 1, 2, or 3~~ which further includes processing time storage means for storing scheduling time beforehand determined for each of the processing requests. The start time calculating means calculates total time of scheduling time according to scheduling time corresponding to each processing request type stored in the processing time storage means and calculates, according to the processing requests received

B9 by the request receiving means, a scheduling start time relative to the scheduling processing end time.

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Please replace paragraph starting at page 11, line 12, with the following rewritten paragraph:

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B10 In accordance with still another feature of the invention described in claim 4, the ~~scheduling controller includes processing time storage means for storing scheduling time beforehand for each of the processing requests.~~ To, to calculate the scheduling start time, the start time calculating means reads processing time for each processing request stored in the processing time storage means and accumulates the processing time using the number of processing requests to thereby easily calculate the total time of scheduling processing time.

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Please replace paragraph starting at page 11, line 21, with the following rewritten paragraph:

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B11 In accordance with another aspect of the invention described in claim 5, there is provided a scheduling method, comprising the steps of (1) receiving a plurality of processing requests, (2) calculating, according to a number of processing requests received by the request receiving step and types thereof, a scheduling start time relative to a scheduling end time predetermined, and (3) scheduling processing requests received by the request receiving step from the scheduling start time calculated by the start time calculating step to the scheduling end time.

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Please replace paragraph starting at page 11, line 30, continuing onto page 12 with the following rewritten paragraph:

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B12 Preferably, In the invention described in claim 5, a plurality of processing requests is received by the request receiving step. In the start time calculating step, total time necessary for the scheduling is calculated according to a number of processing requests received by the request receiving step and types thereof to obtain a scheduling start time relative to a scheduling end time predetermined. In the scheduling step the processing requests received by the request receiving step, the processing requests received by the request receiving step from

B.12 the scheduling start time calculated by the start time calculating step to the scheduling end time are scheduled.

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Please replace paragraph starting at page 12, line 9, with the following rewritten paragraph:

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B.13 In accordance with another aspect of the invention ~~described in claim 6~~, there is provided a scheduling method, comprising the steps of (1) receiving processing requests from a plurality of terminal stations, each of the processing request being a transmission band pass request and including a transmission request and data length thereof, (2) calculating, according to the processing requests received by the request receiving step, a scheduling start time relative to a scheduling end time predetermined, (3) allocating processing requests received by the request receiving step from the scheduling start time calculated by the start time calculating step to the scheduling end time to time slots in a frame, and (4) reporting information of time slot allocation by the scheduling step to the terminal stations.

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Please replace paragraph starting at page 12, line 22, continuing onto page 13 with the following rewritten paragraph:

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B.14 Preferably ~~In the invention described in claim 6~~, processing requests are received from a plurality of terminal stations in the request receiving step. Each of the processing requests is a transmission band pass request and includes a transmission request and a data length thereof. In the start time calculating step, total time necessary for the scheduling is calculated according to a number of processing requests received by the request receiving step and types thereof to obtain the scheduling start time relative to the scheduling end time predetermined. In the scheduling step, the scheduling is achieved such that the processing requests received by the request receiving step from the scheduling start time calculated by the start time calculating step to the scheduling end time are allocated to time slots in a frame. In this way, the dynamic slot allocation is achieved. In the reporting step, information of a result of the scheduling is notified to the terminal stations.

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Please replace paragraph starting at page 15, line 2, with the following rewritten paragraph:

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B15  
Base station 41 of this embodiment includes an interface 43 having a function to interface communication signals on network 42 with inside signals of base station 41 and a transceiver 44 which conducts modulation and demodulation and communication of signals for radio communication with all terminal stations including first terminal station 40<sub>1</sub>. Base station 41 includes a processing request analyzer 45 to analyze a band pass request associated with data transmission request and data length for data inputted via network 41 42 to each terminal station and a data transmission request and its data length notified from terminal station, a scheduler 46 to allocate, for each terminal station, a communication time position and length thereof in a frame in a transmission order, a framer 47 to allocate contents of processing to real time positions in a frame according to a result of scheduling generated by scheduler 46, a controller 48 to control each functional section of these components. Base station 42 further includes a start/end time controller 49 to achieve a start/end time control operation in which at least a scheduling start time or a scheduling end time is controlled according to a state of reception of various processing requests. In the description of this embodiment, controller 49 controls the scheduling start time.

Please replace paragraph starting at page 15, line 23, continuing onto page 16 with the following rewritten paragraph:

B16  
When transceiver 44 receives forward transmission data and a control signal from each terminal station, controller 48 activates processing request analyzer 45 to analyze a transmission request and transmission data length which are notified to base station 41 by the forward control signal from the pertinent terminal station and a data transmission request appearing in base station 41 to transmit data to each terminal station and a transmission data length. The transmission request to each terminal station in base station 41 takes place according to a state of communication of data with network 42 via interface 43. Controller 48 instructs scheduler 46 to allocate, in response to a plurality of processing requests analyzed by analyzer 24 45, transmission time positions and lengths thereof in a frame in the time slot unit.

Please replace paragraph starting at page 17, line 21, with the following rewritten paragraph:

B-7  
Scheduling section 52 of scheduler 46 waits for a counter increment event such as a rising edge of the reference timing signal (step S60). When such an ~~even~~ event is detected (Y in step S60), a check is made to determine whether or not the frame end time beforehand specified in the scheduling information stored in scheduling information storage 51 is reached (step S61). If the frame end time is not reached (N in step S61), the counter is incremented (step S62). If the frame end time is reached (Y in step S61), the counter is reset (step S63).

Please replace paragraph starting at page 20, line 12, with the following rewritten paragraph:

B-8  
The transmission time positions and associated lengths allocated by scheduler 46 are sent to ~~frame~~ framer 47.

Please replace paragraph starting at page 21, line 17, continuing onto page 18 with the following rewritten paragraph:

B-9  
As above, in the radio communication system conducting DSA to which the scheduling controller of the embodiment is applied, the base station calculates, for each TDMA frame, the scheduling start time according to the number of processing requests for each request type appearing from the predetermined scheduling end time (the scheduling start time of the preceding frame) to the scheduling start time of the pertinent frame to ~~flexible~~ flexibly control time in the scheduling. Therefore, the scheduling result associated with the scheduling time necessary for respective processing requests can be reflected in the next frame. Consequently, the condition of the latest processing request is reflected in the next frame scheduling. That is, by moving the scheduling start time backward in time, the new condition can be used as information for a processing request at the scheduling start time, and the scheduling can be controlled in a desirably realtime fashion.